Title: MATERIAL CONDITION ASSESSMENT...

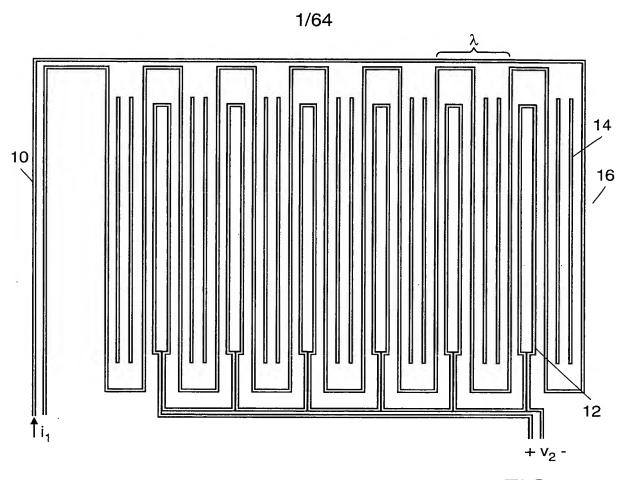


FIG. 1

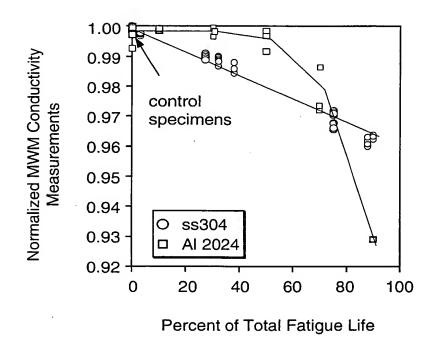


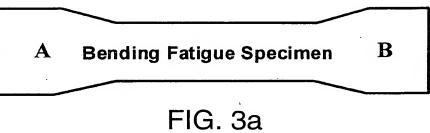
FIG. 2

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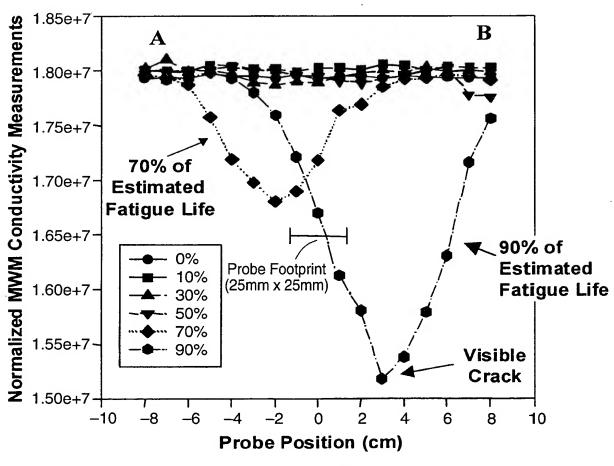


FIG. 3b

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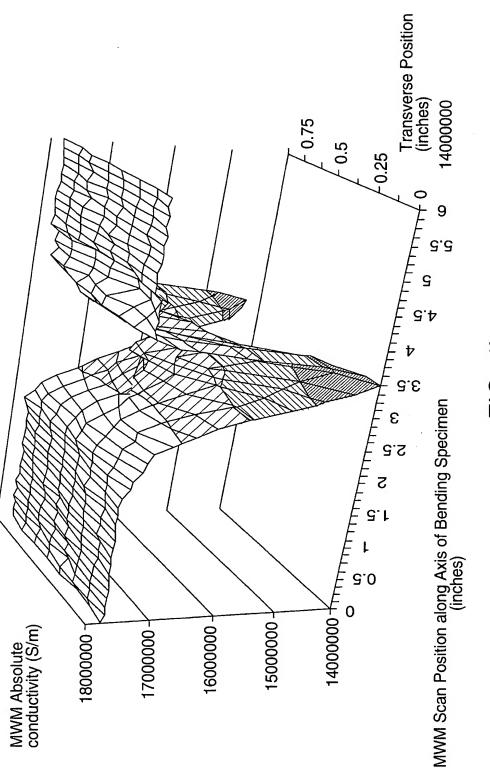
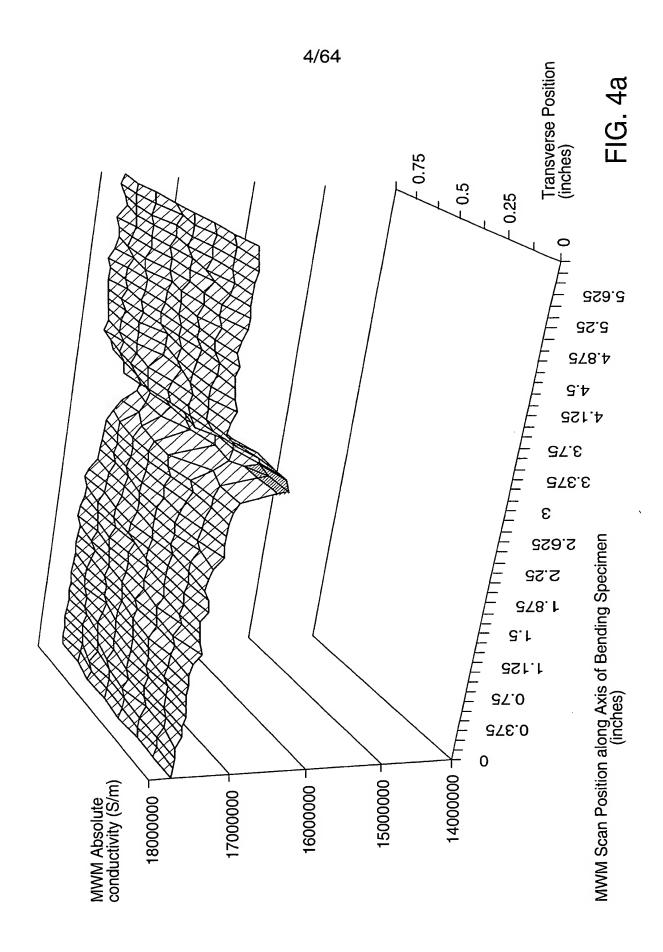


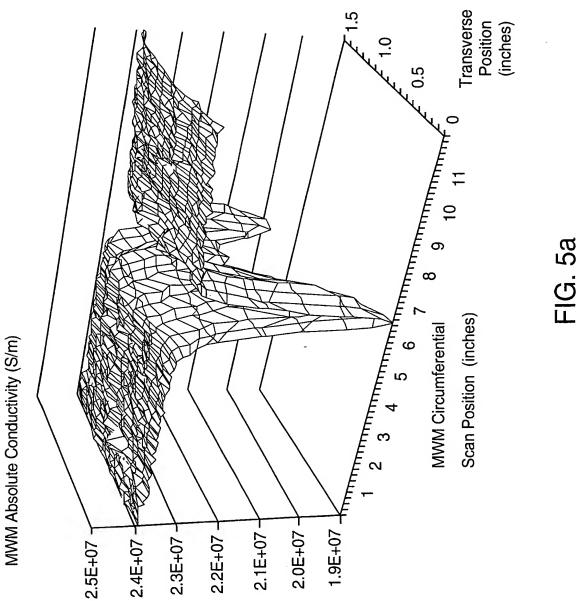
FIG. 4b

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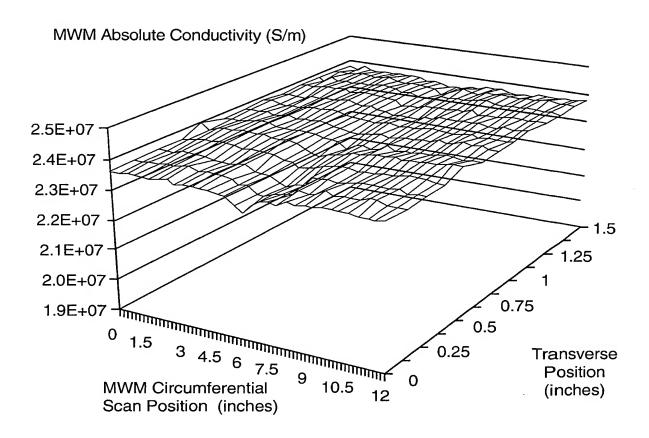


FIG. 5b

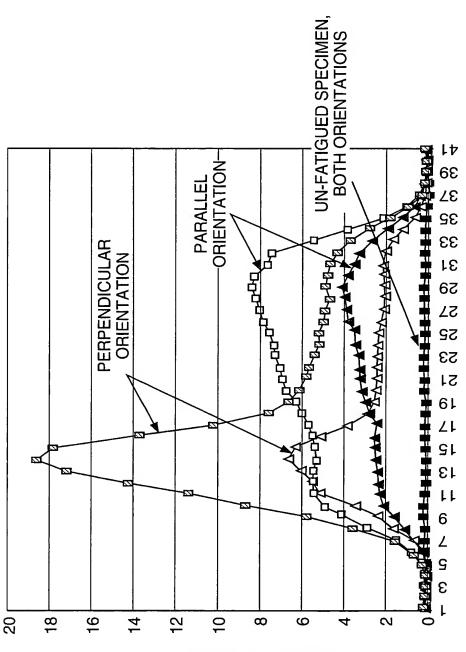
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FIG. 6



MAGNETIC SUSCEPTIBILITY

Title: MATERIAL CONDITION ASSESSMENT...

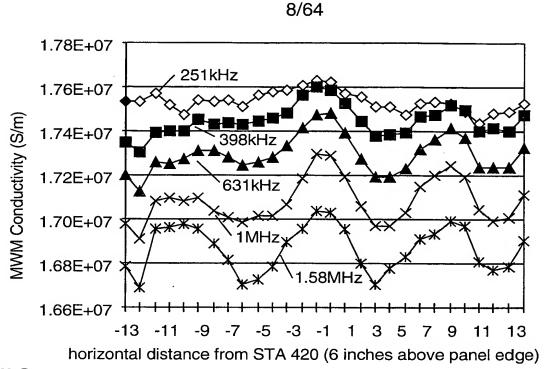


FIG. 7a

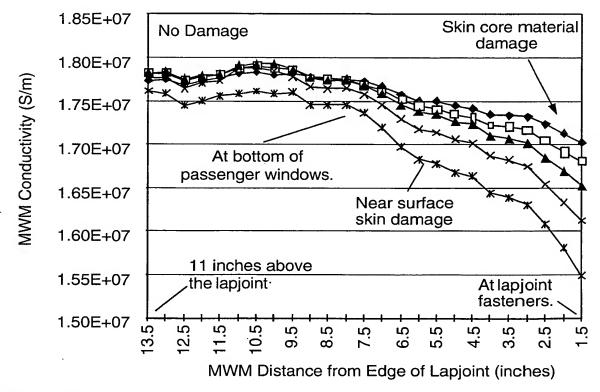


FIG. 7b

Title: MATERIAL CONDITION ASSESSMENT...

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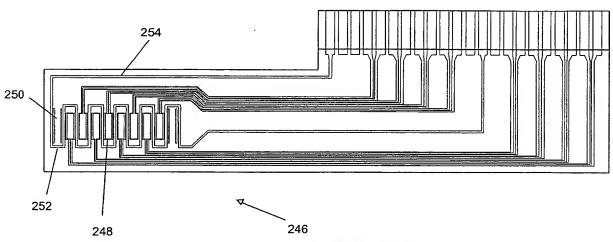


FIG. 8a

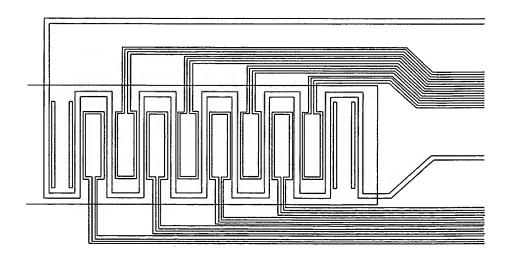


FIG. 8b

Title: MATERIAL CONDITION ASSESSMENT...

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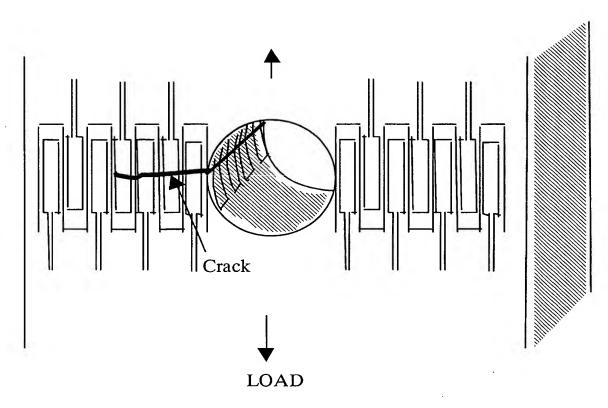


FIG. 9

Title: MATERIAL CONDITION ASSESSMENT...

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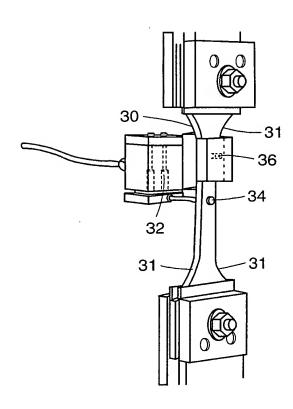


FIG. 10

Title: MATERIAL CONDITION ASSESSMENT...

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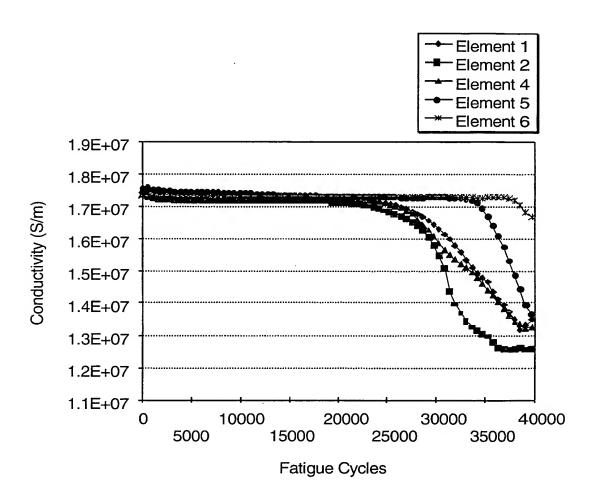


FIG. 11a

Title: MATERIAL CONDITION ASSESSMENT...

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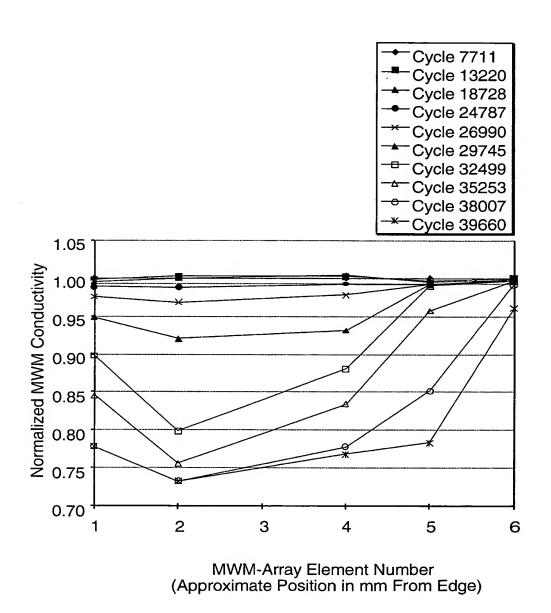
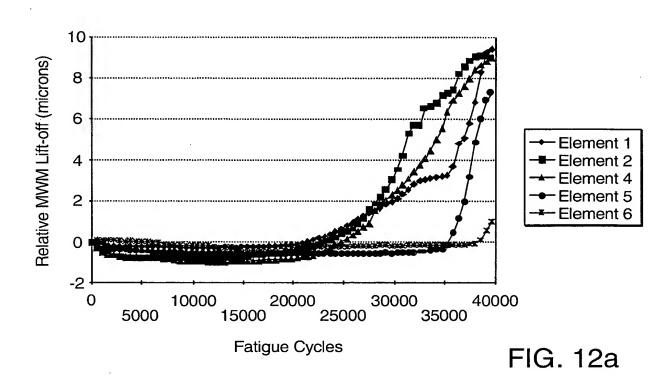
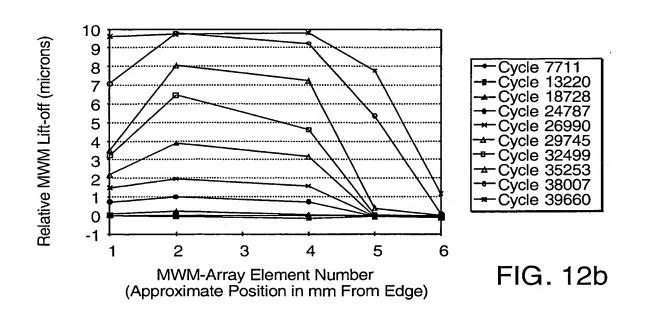


FIG. 11b

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Title: MATERIAL CONDITION ASSESSMENT...

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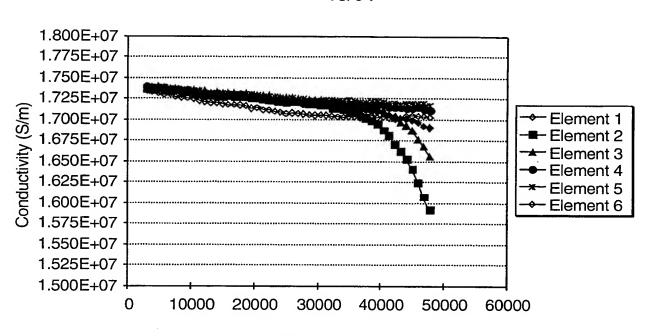
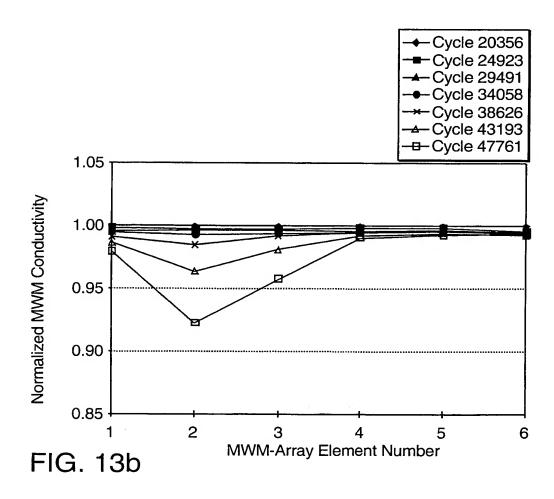


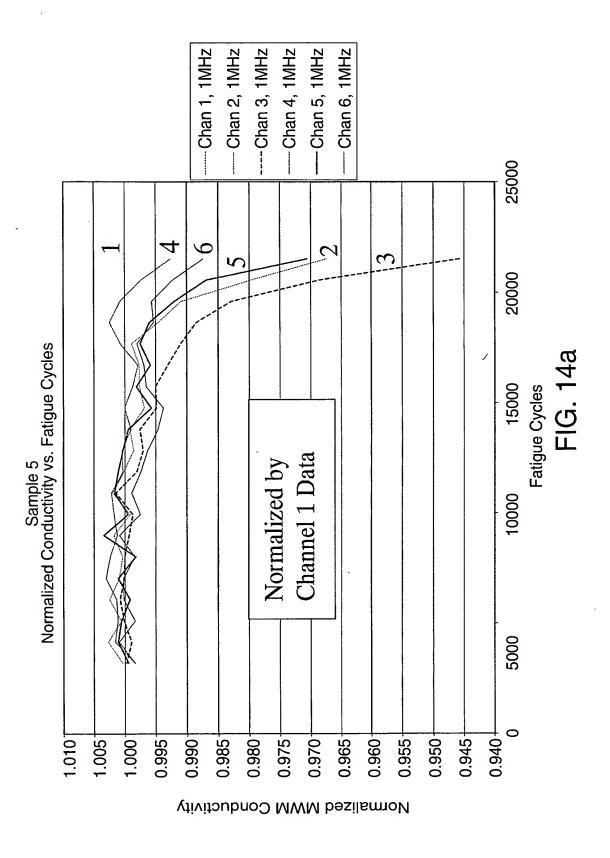
FIG. 13a

Fatigue Cycles



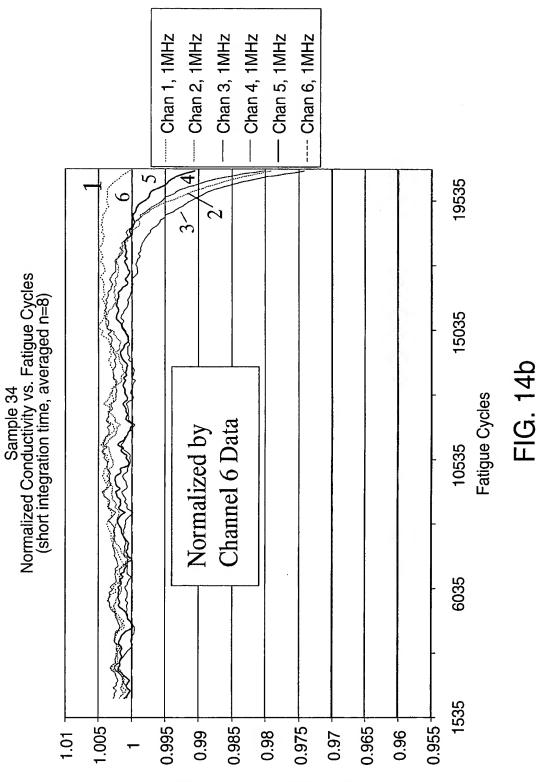
Title: MATERIAL CONDITION ASSESSMENT...

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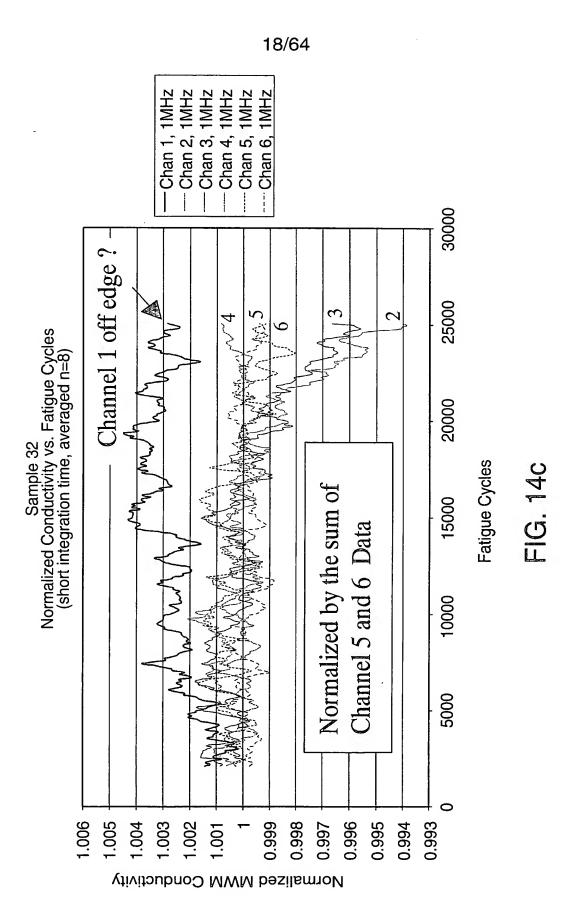
Title: MATERIAL CONDITION ASSESSMENT...





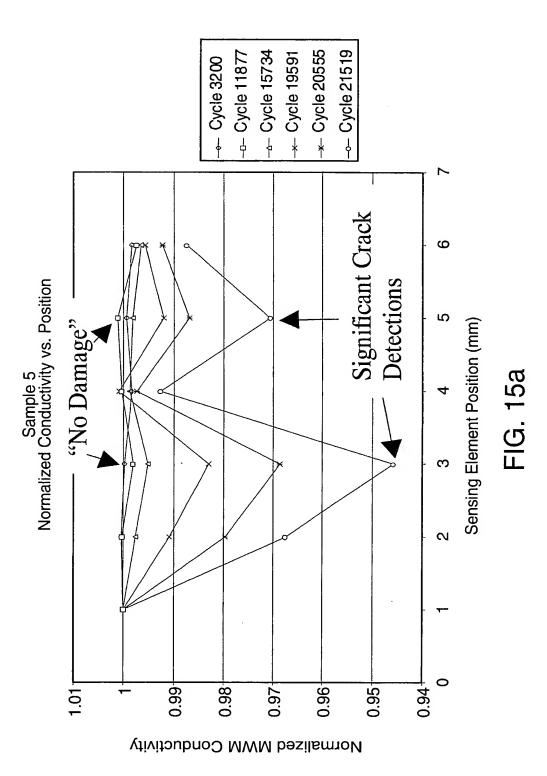
Normalized MWM Conductivity

Title: MATERIAL CONDITION ASSESSMENT...



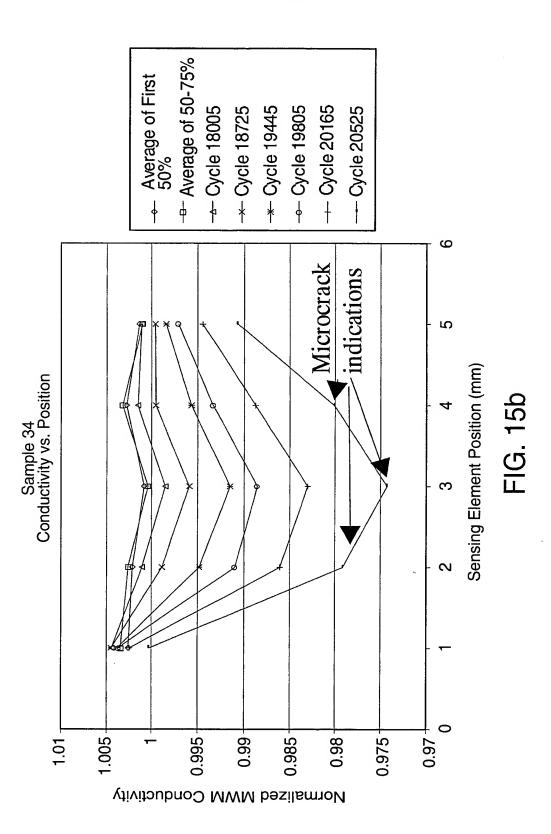
Title: MATERIAL CONDITION ASSESSMENT...

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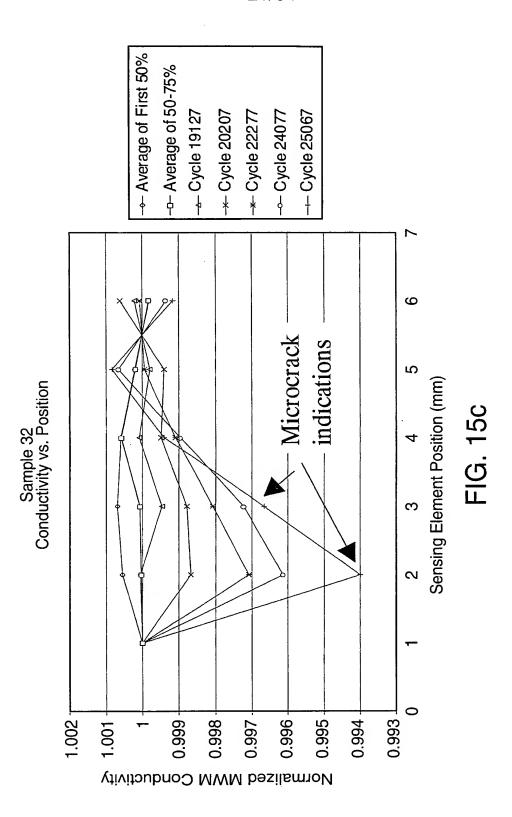
Title: MATERIAL CONDITION ASSESSMENT...

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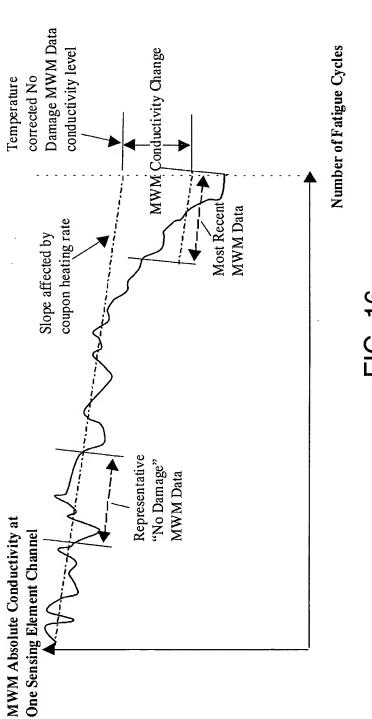


FIG. 16

Title: MATERIAL CONDITION ASSESSMENT...

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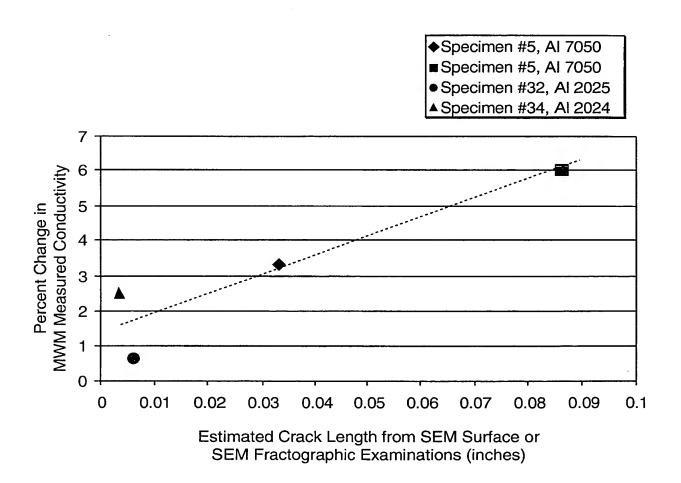
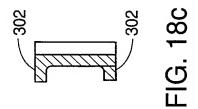
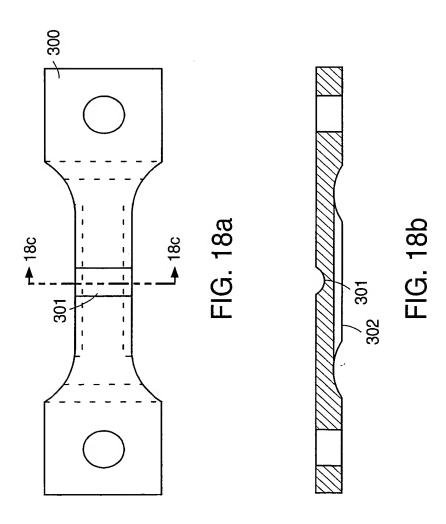


FIG. 17

Title: MATERIAL CONDITION ASSESSMENT...
Inventors: Neil J. Goldfine, et al.

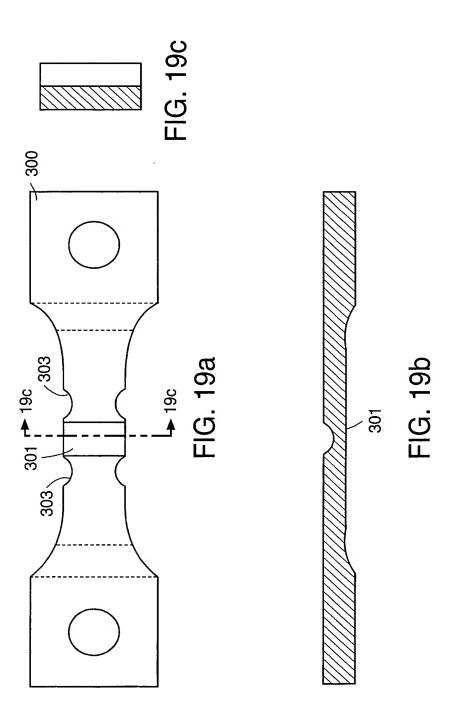
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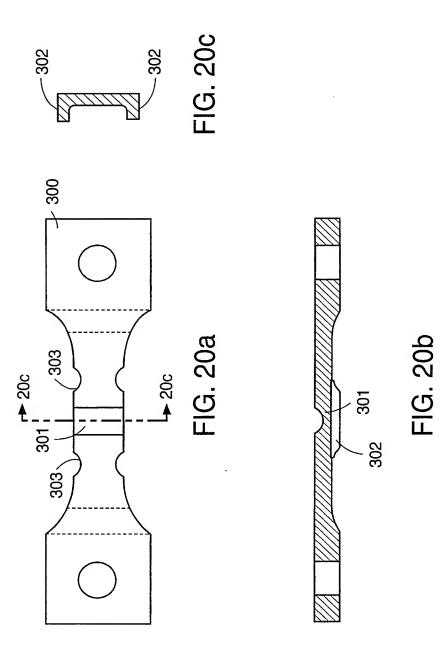
Title: MATERIAL CONDITION ASSESSMENT...
Inventors: Neil J. Goldfine, et al.

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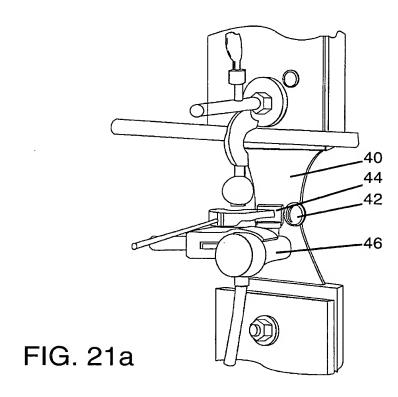
Title: MATERIAL CONDITION ASSESSMENT... Inventors: Neil J. Goldfine, et al.

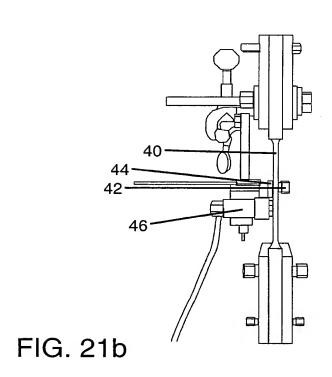
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Title: MATERIAL CONDITION ASSESSMENT...

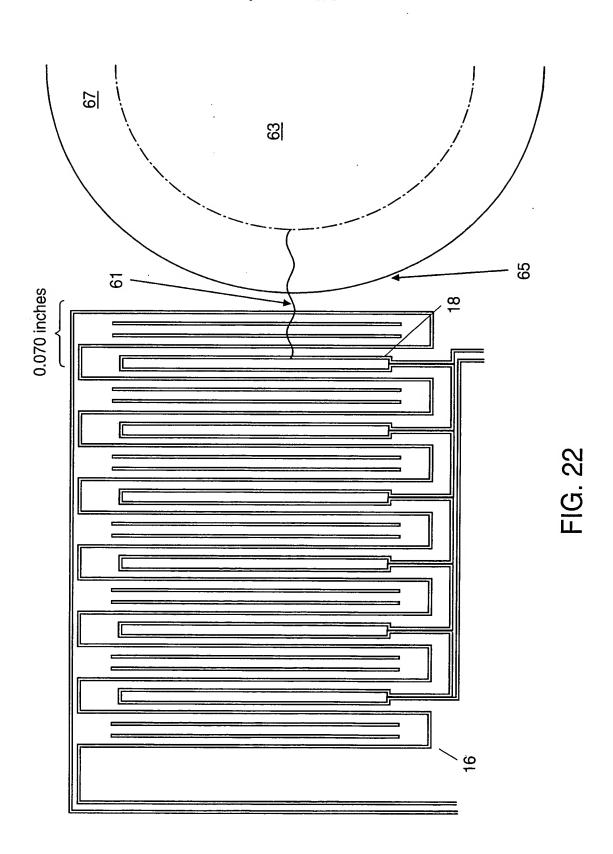
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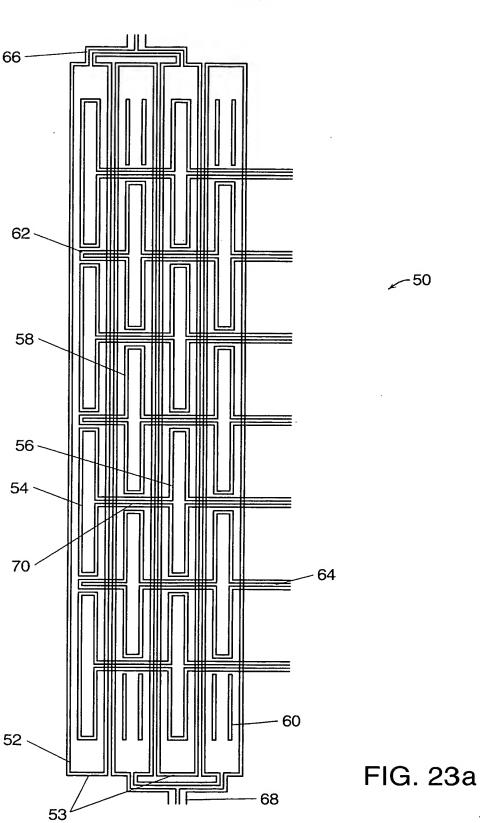
Title: MATERIAL CONDITION ASSESSMENT...

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Title: MATERIAL CONDITION ASSESSMENT... Inventors: Neil J. Goldfine, et al.





Title: MATERIAL CONDITION ASSESSMENT...

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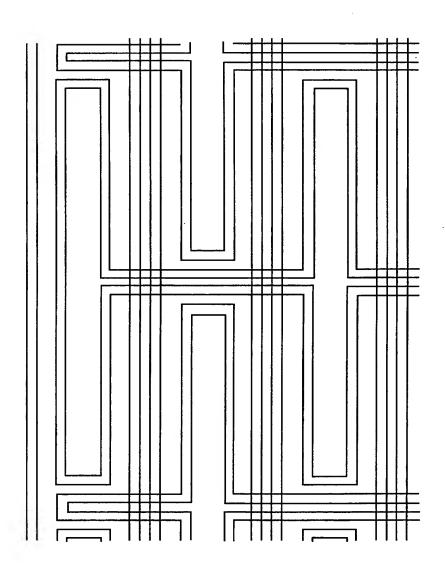


FIG. 23b

Title: MATERIAL CONDITION ASSESSMENT...

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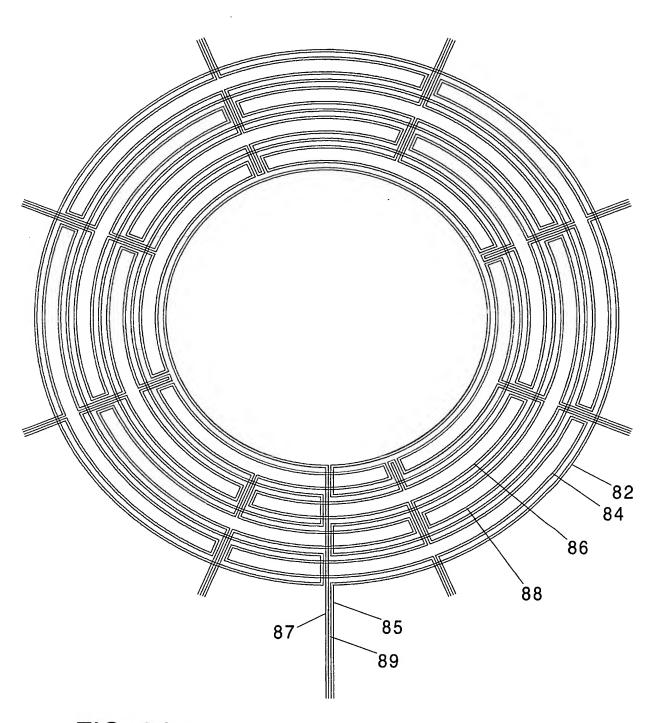


FIG. 24a

Title: MATERIAL CONDITION ASSESSMENT...

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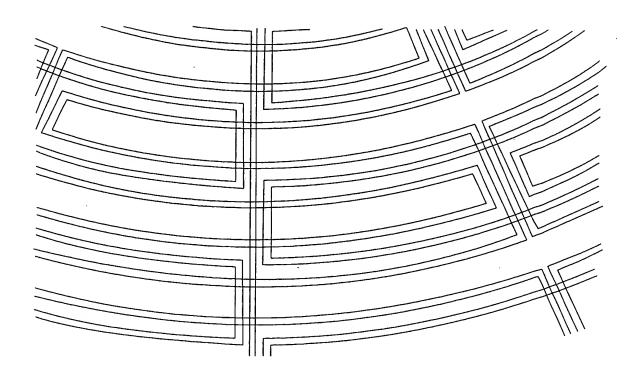


FIG. 24b

Title: MATERIAL CONDITION ASSESSMENT...

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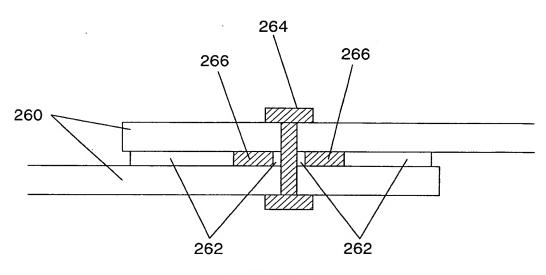


FIG. 25

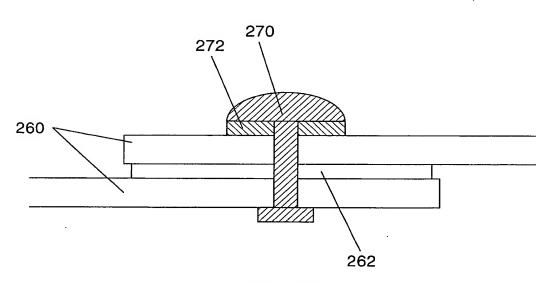


FIG. 26

Title: MATERIAL CONDITION ASSESSMENT...

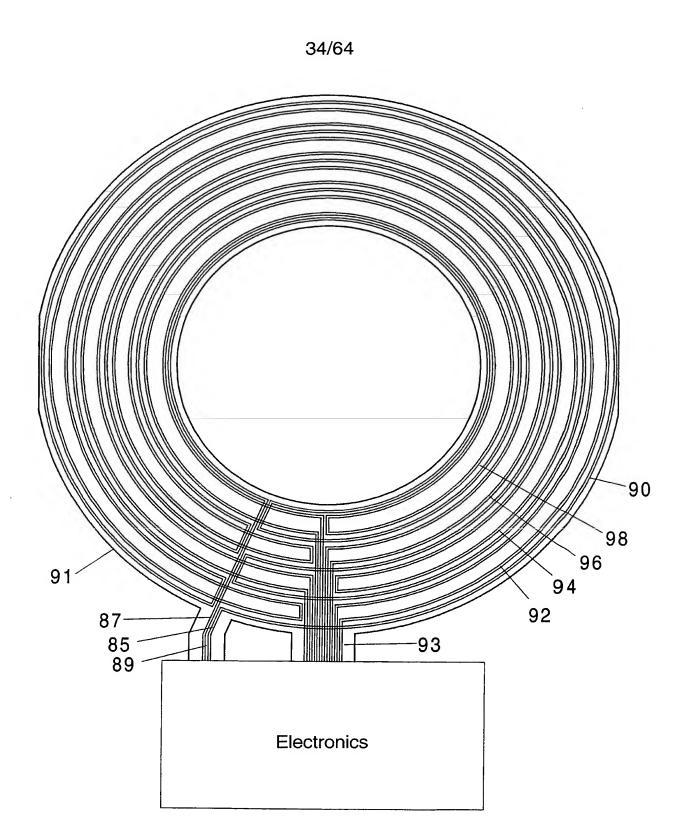


FIG. 27a

Title: MATERIAL CONDITION ASSESSMENT...

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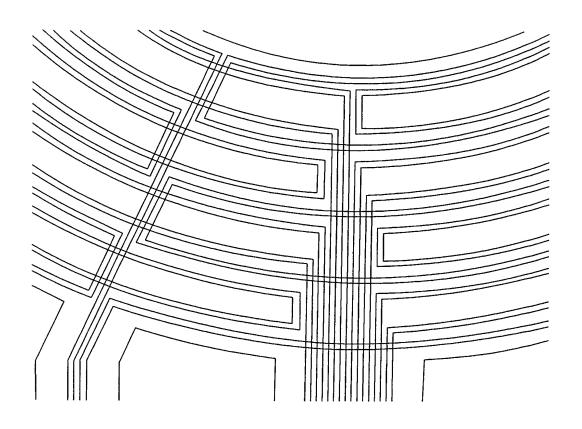
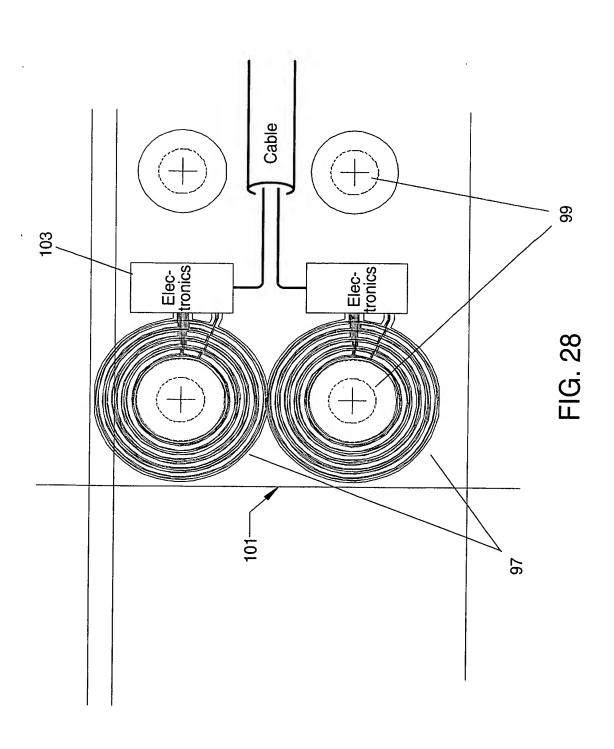


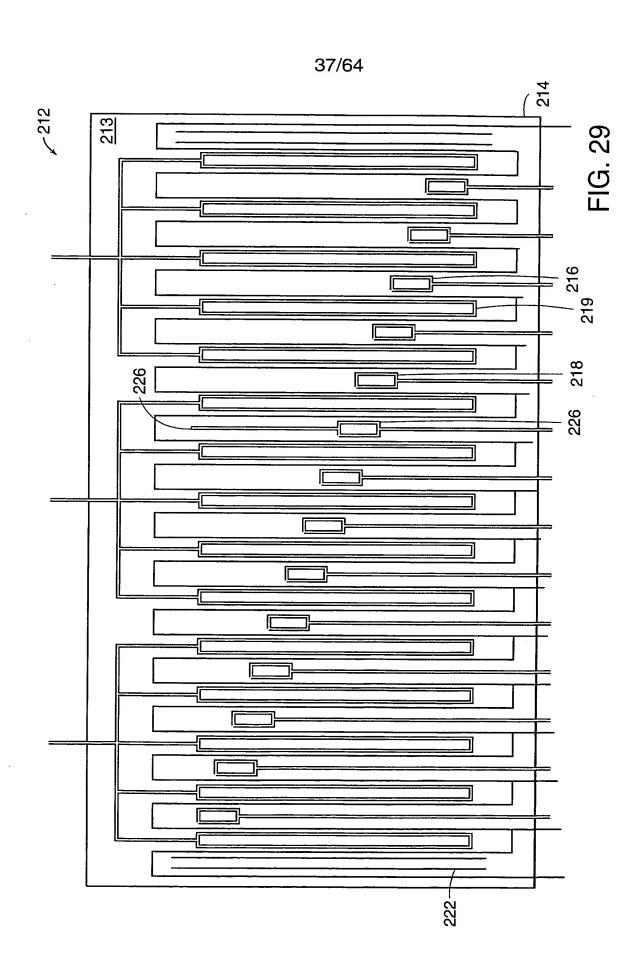
FIG. 27b

Title: MATERIAL CONDITION ASSESSMENT... Inventors: Neil J. Goldfine, et al.

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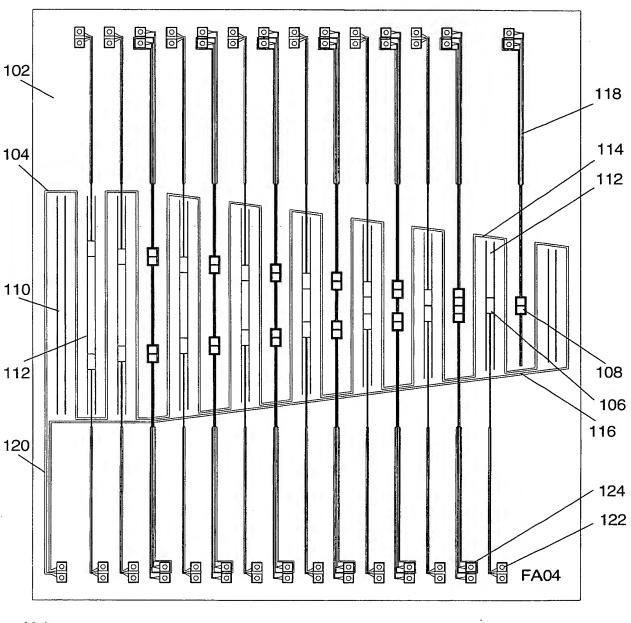


Title: MATERIAL CONDITION ASSESSMENT...



Title: MATERIAL CONDITION ASSESSMENT...

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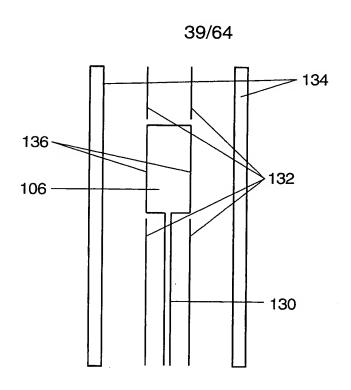


FIG. 31

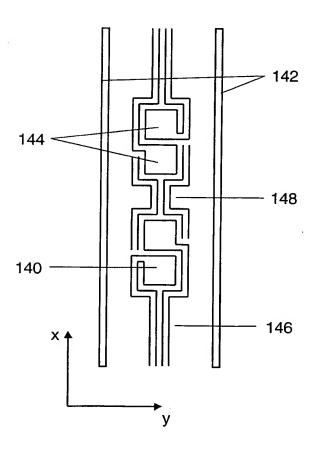
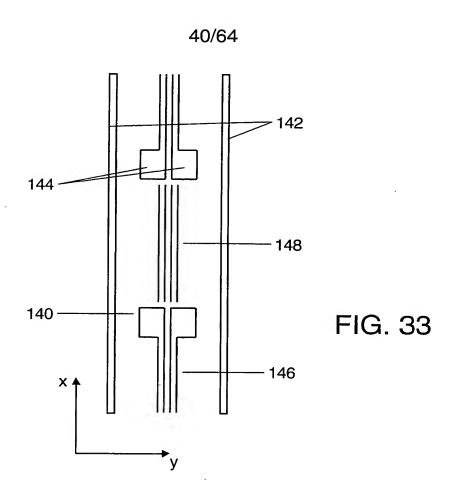
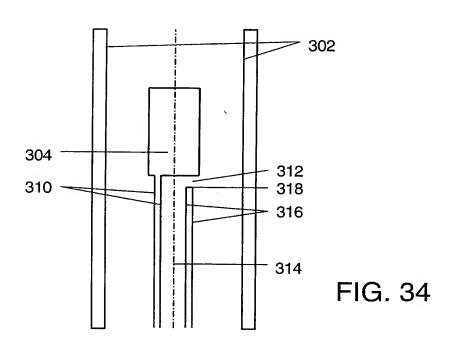


FIG. 32

Title: MATERIAL CONDITION ASSESSMENT... Inventors: Neil J. Goldfine, et al.





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Inventors: Neil J. Goldfine, et al.

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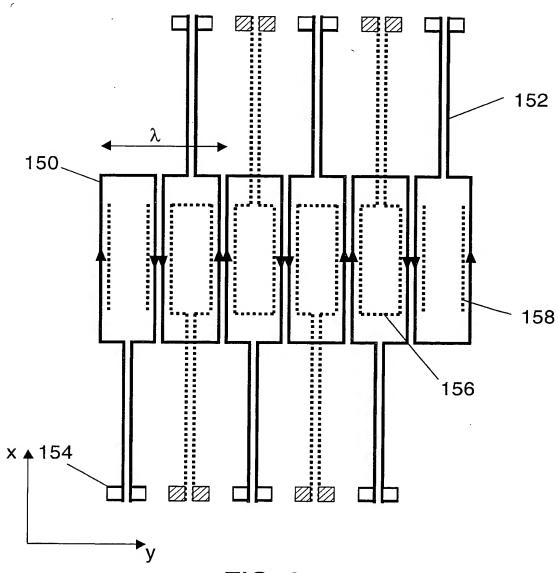


FIG. 35

Title: MATERIAL CONDITION ASSESSMENT...

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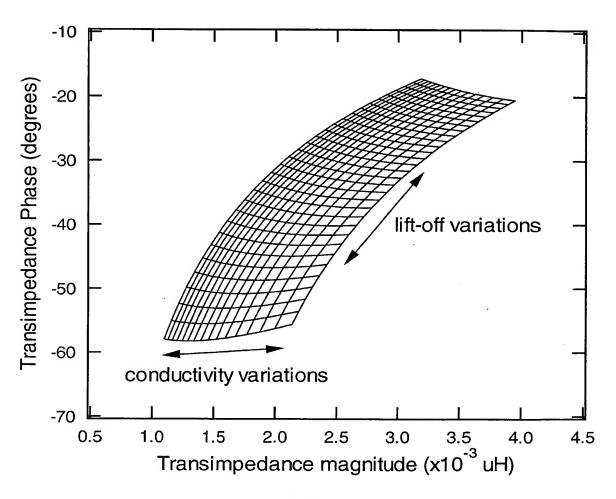
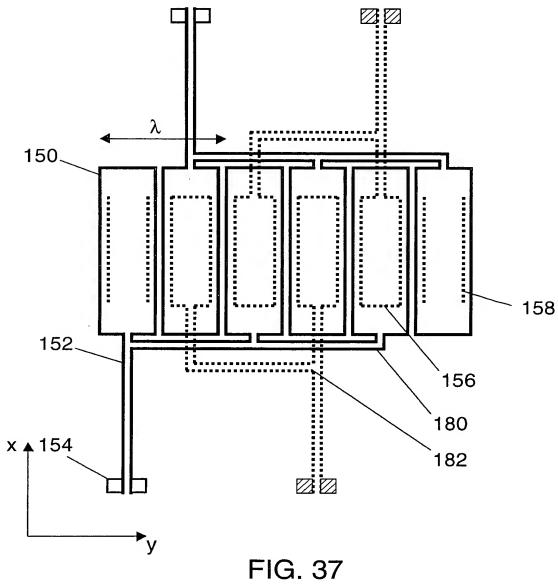


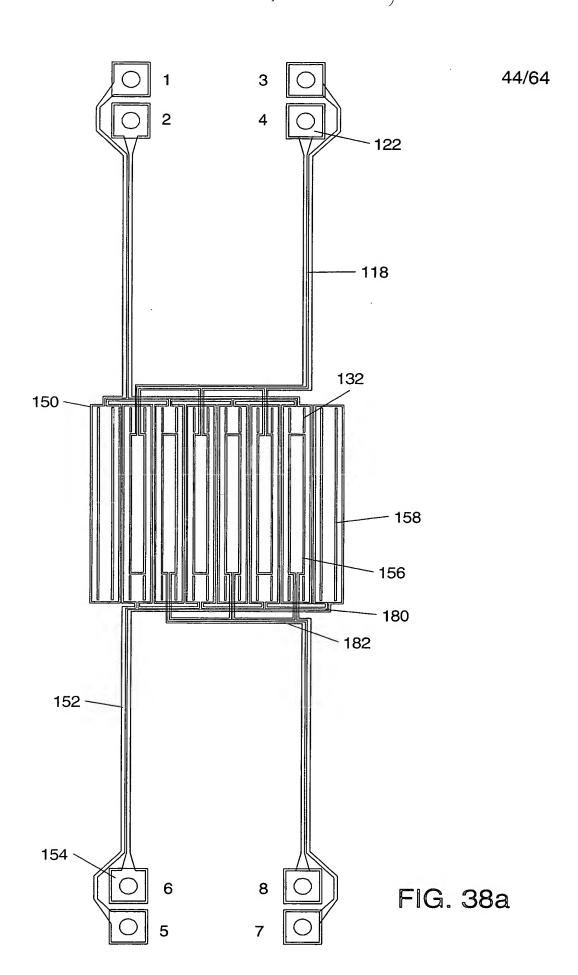
FIG. 36

Title: MATERIAL CONDITION ASSESSMENT...
Inventors: Neil J. Goldfine, et al.

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Title: MATERIAL CONDITION ASSESSMENT...



Title: MATERIAL CONDITION ASSESSMENT...

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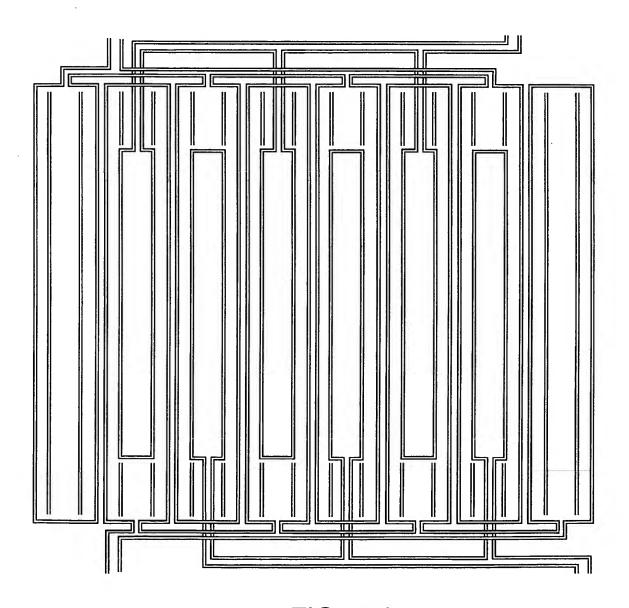


FIG. 38b

Title: MATERIAL CONDITION ASSESSMENT...

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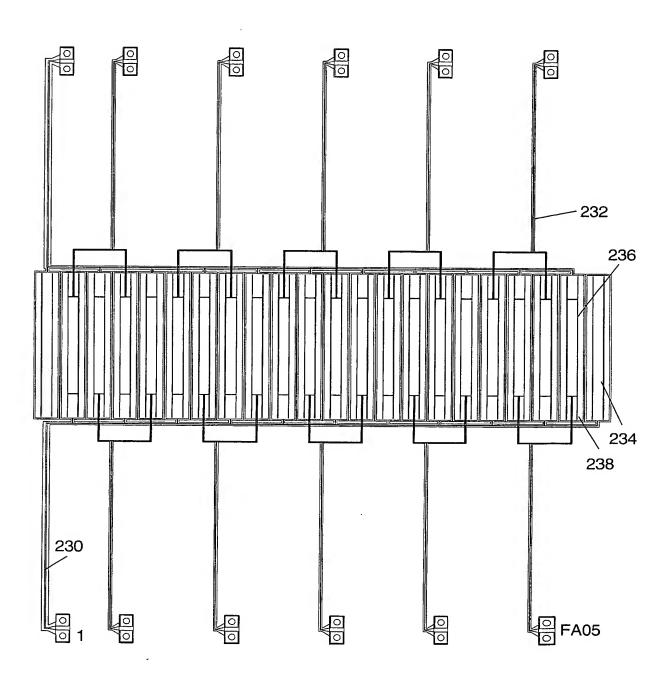


FIG. 39

Title: MATERIAL CONDITION ASSESSMENT...

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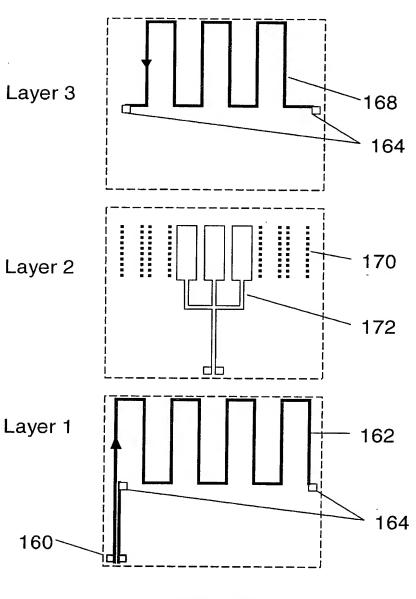
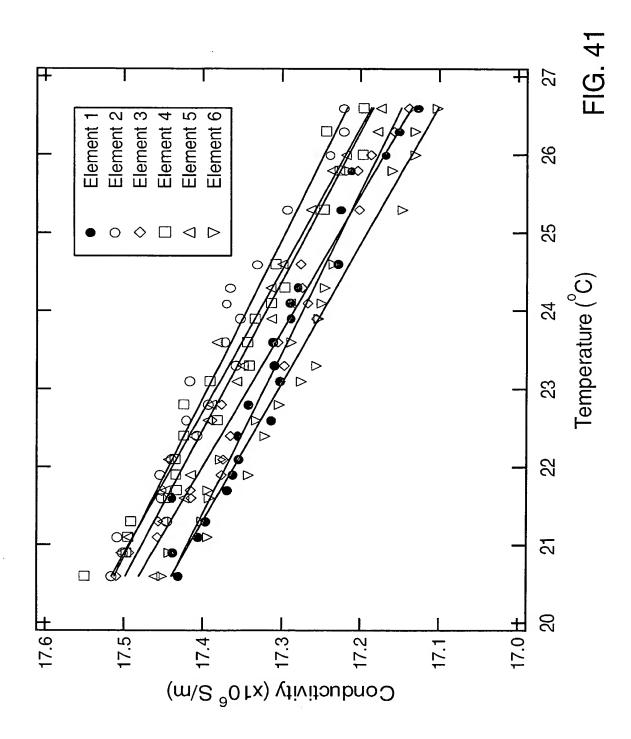


FIG. 40

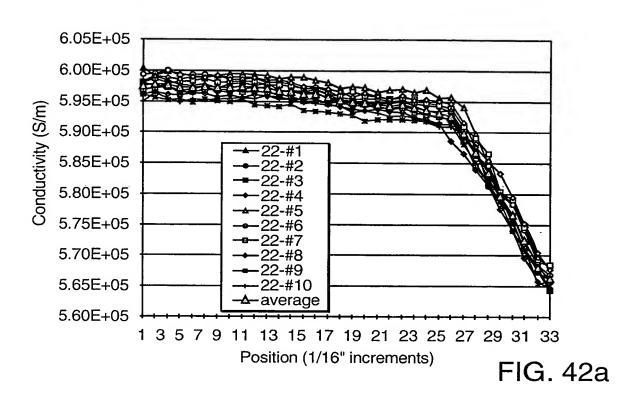
Title: MATERIAL CONDITION ASSESSMENT...

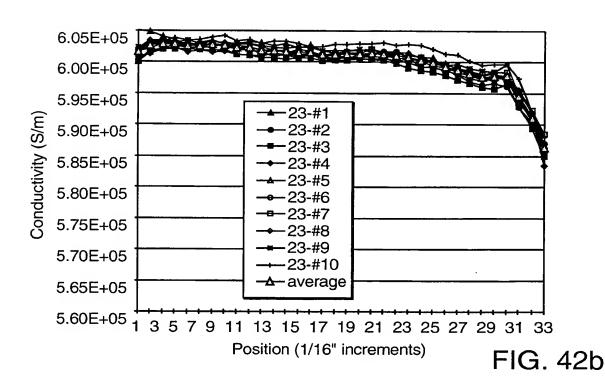
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Title: MATERIAL CONDITION ASSESSMENT...

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Title: MATERIAL CONDITION ASSESSMENT...



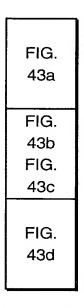


FIG. 43

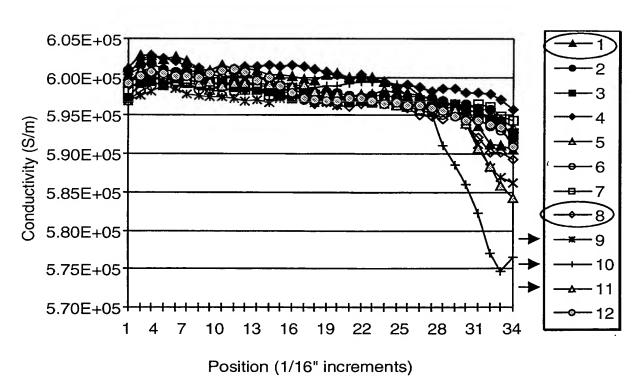


FIG. 43a

Title: MATERIAL CONDITION ASSESSMENT...

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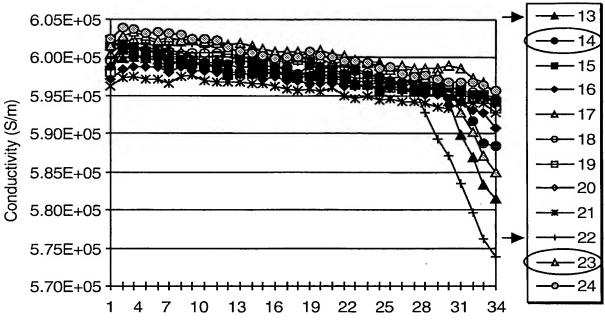


FIG. 43b Position (1/16" increments)

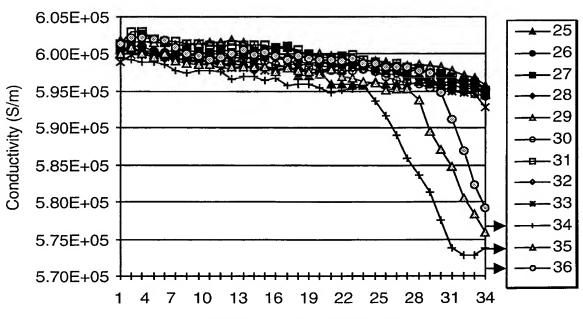


FIG. 43c Position (1/16" increments)

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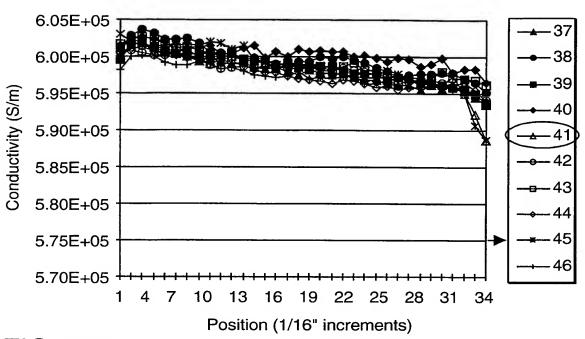


FIG. 43d

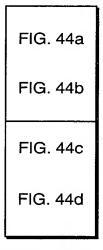


FIG. 44

Title: MATERIAL CONDITION ASSESSMENT...

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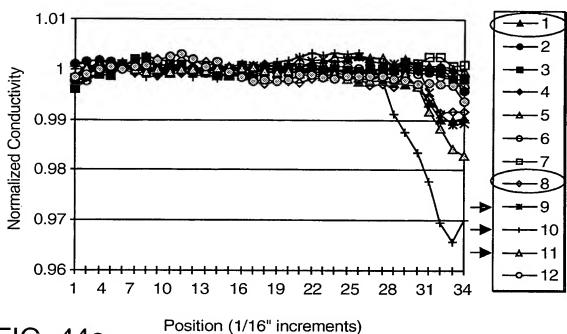


FIG. 44a

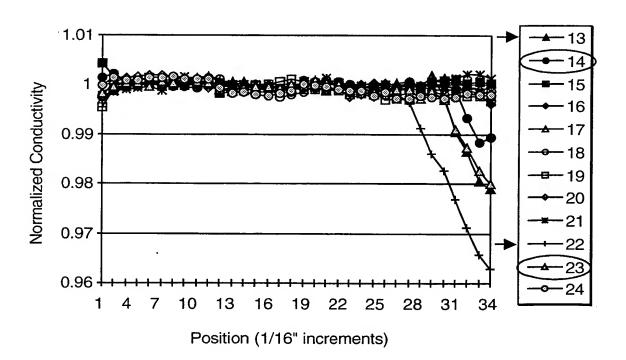


FIG. 44b

Title: MATERIAL CONDITION ASSESSMENT...

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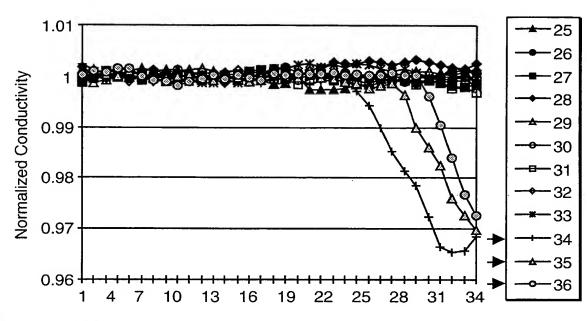
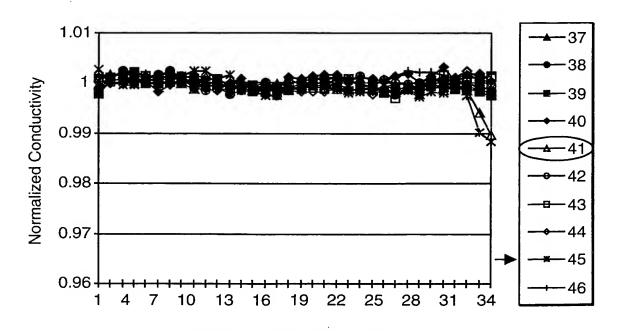


FIG. 44c Position (1/16" increments)

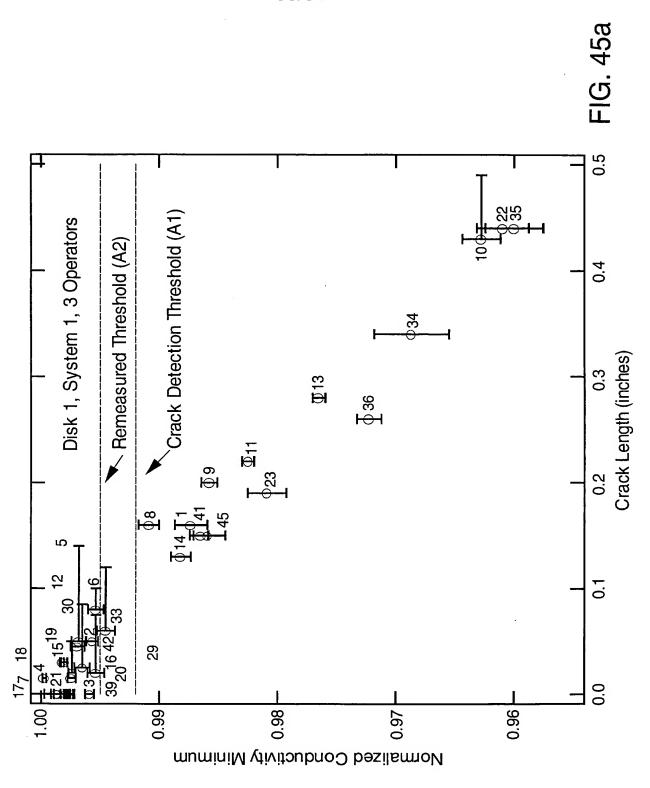


Position (1/16" increments)

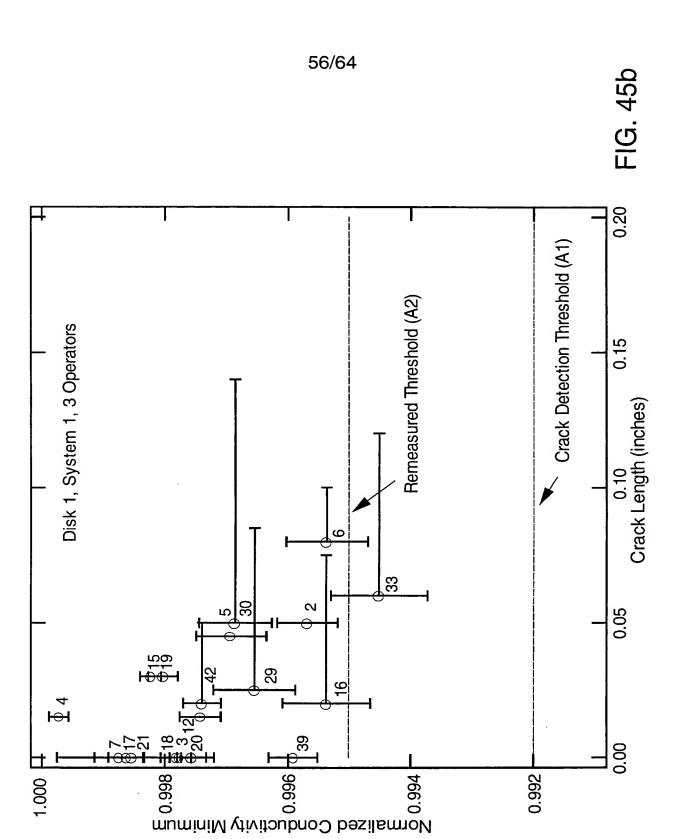
FIG. 44d

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Title: MATERIAL CONDITION ASSESSMENT...



Title: MATERIAL CONDITION ASSESSMENT...

Inventors: Neil J. Goldfine, et al.

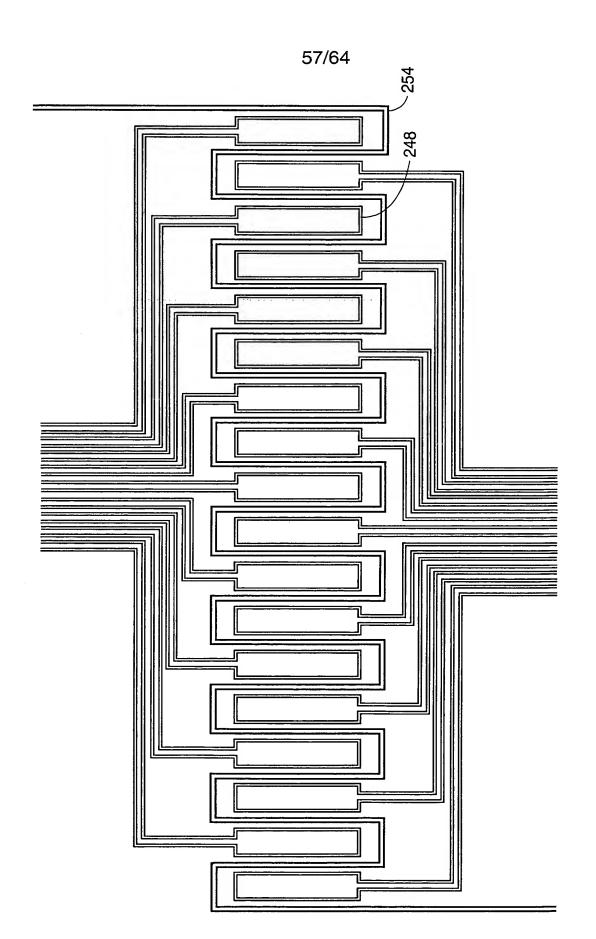


FIG. 46

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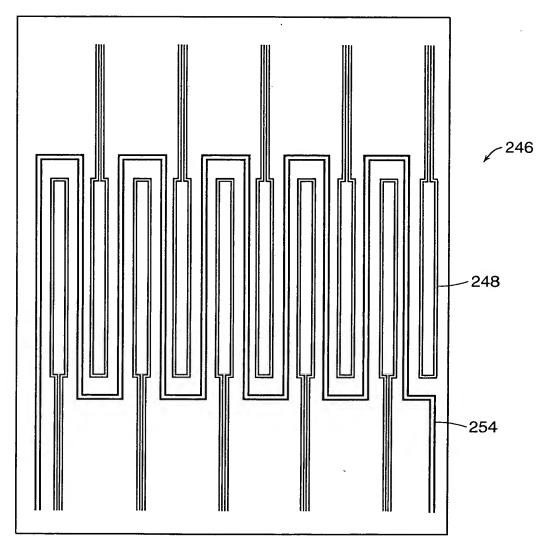


FIG. 47

Title: MATERIAL CONDITION ASSESSMENT...

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MWM Monitoring of Weld Quality in GTAW Ti-2 Welds at 400 kHz

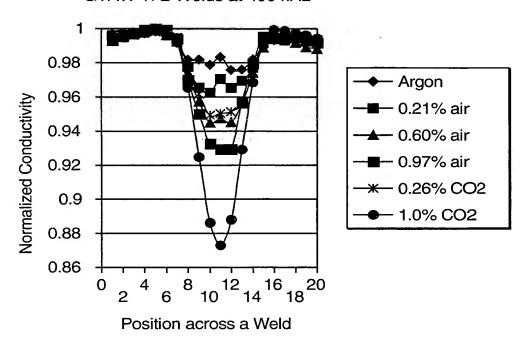


FIG. 48

Title: MATERIAL CONDITION ASSESSMENT...

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Effect of Argon Contamination by Air on Normalized Conductivity of Autogeneous GTA Ti-2 Weld

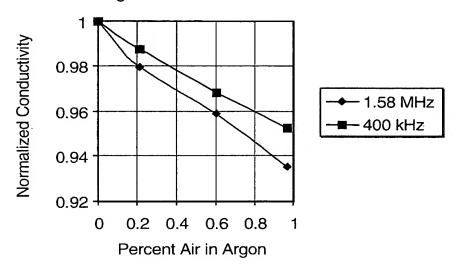


FIG. 49

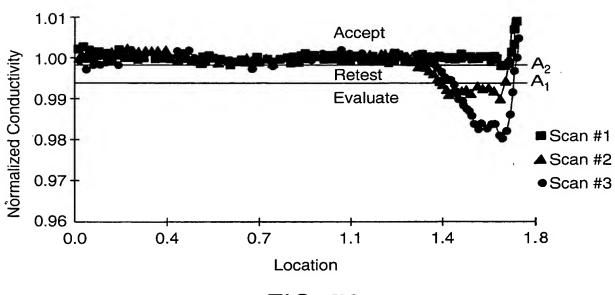
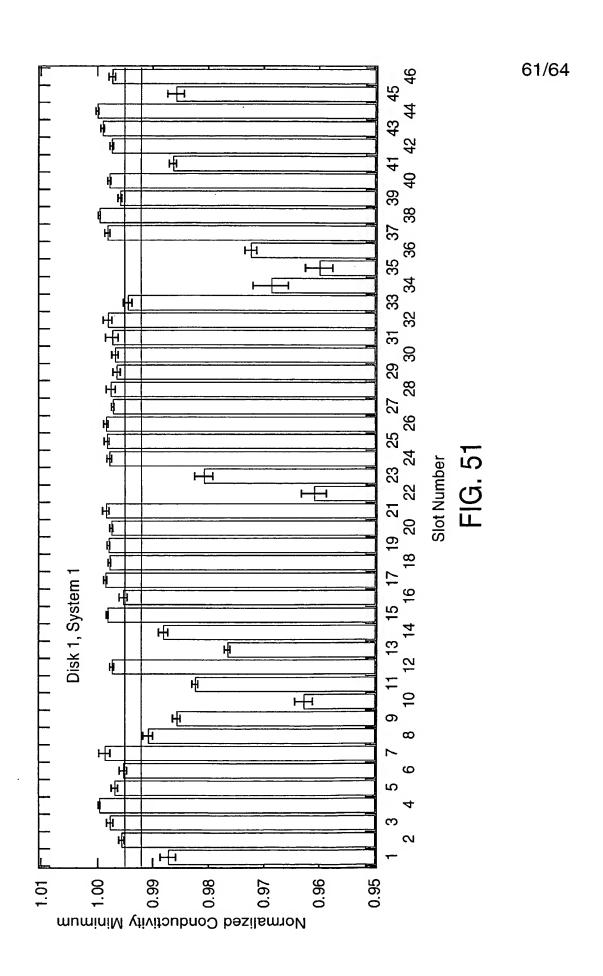


FIG. 50

Title: MATERIAL CONDITION ASSESSMENT...



Title: MATERIAL CONDITION ASSESSMENT...

Inventors: Neil J. Goldfine, et al.



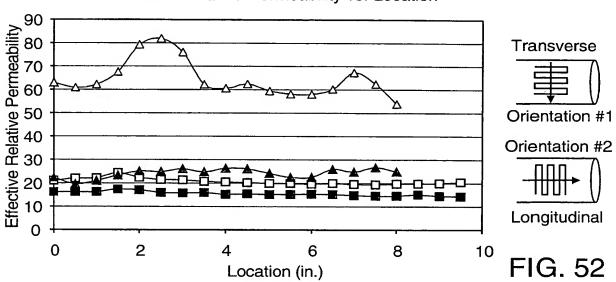
■ Barrel 5, Orientation 1

-□-Barrel 5, Orientation 2

Barrel 2a, Orientation 1

∆- Barrel 2a, Orientation 2

Effective Relative Permeability vs. Location



Effect of Overheating on Directional Permeability of 25mm Gun Barrel Sample 5 and 2a - FS26 Sensor 100 kHz

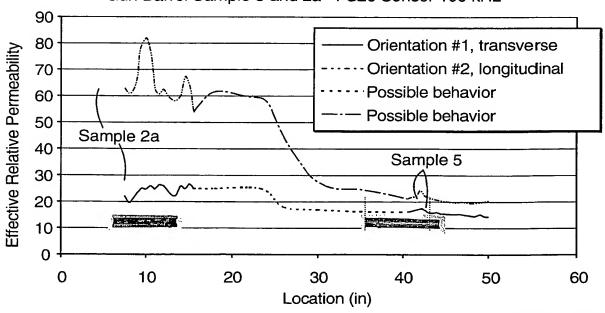
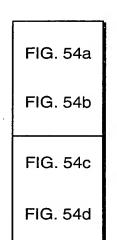


FIG. 53

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FIG. 54

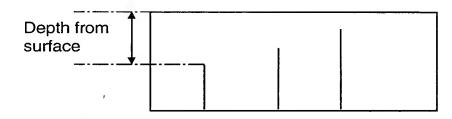


FIG. 54a

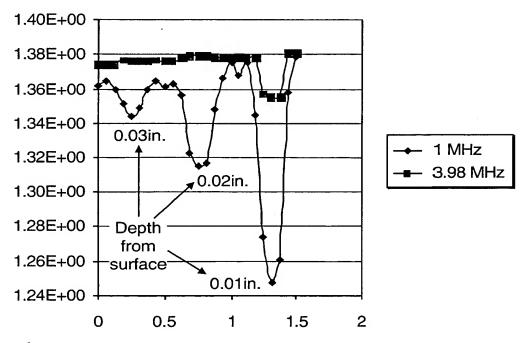


FIG. 54b

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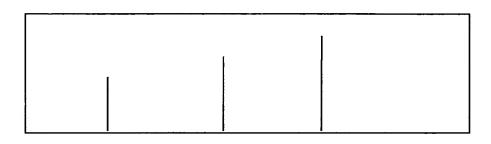


FIG. 54c

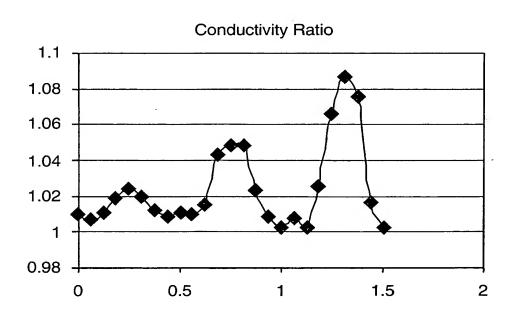


FIG. 54d